

conference call participants (col. 5, lines 37-39). As recited in Shaffer et al., FIGS. 4 and 5 illustrate a reconfiguration of the connectivity between the participants of a single conference. FIG. 4 shows the connectivity through PBX1 via lines 64 and 72 for a conference between users 24, 66 and 74 (col. 9, line 58 to col. 10, line 1; and col. 11, lines 1-4). Based on various criteria, a reconfiguration of the connectivity of the conference between users 24, 66 and 74 is shown in FIG. 5 as being through PBX2 via lines 64 and 82 (col. 11, lines 20-30).

Thus, Shaffer et al. are concerned with reconfiguring the links between multiple switches to accommodate a conference so as to minimize cost over the network of switches. In reference to FIG. 2, Shaffer et al. discloses inputting location information for “one or more parties of a conference call session,” (col. 7, lines 35-37 emphasis added). Similar references in Shaffer et al. to a session, or the conference call, or the like do not teach or suggest Applicant’s system or method for moving conferences among resources as recited in claims 1, 10 and 19.

Thus, it is considered that Applicant’s recital in claim 1 of moving a channel associated with a second conference to another resource so as to provide room within a first resource to add a channel associated with a first conference is not taught or suggested by Shaffer et al. Similarly, Applicant’s recital in claim 10 of identifying first and second resources and moving a conference from the second resource to the first resource is not taught or suggested by Shaffer et al. Claim 19 recites moving audio conferences among resources when a loss of one of the resources is detected, which is also not taught or suggested by Shaffer et al.

With reference to claim 8, Shaffer et al. do not teach or suggest the structure recited in claim 8 and described in the specification with regard to Fig. 1 (page 3, line 16 through page 6, line 7). The only structure recited in Shaffer et al. as having a conference call relation is the conference bridge 10, which includes a conference bridge manager 12 (Fig. 1). Even given that digital signal processors are known in the art, Shaffer et al. do not teach or suggest a conferencing system having a plurality of network interface cards connected to a host and to a plurality of digital signal processing (dsp) units, with each dsp unit comprising a plurality of digital signal processing resources configured to

manage channels in one or more audio conferences. Further, Shaffer et al. fail to teach or suggest that each dsp unit includes a switch for selectively coupling the dsp resources to a bus such that a host can dynamically assign dsp resources to one or more conferences present within the audio conferencing system.

Additionally, the Examiner contends that the physical makeup of audio conferencing systems are well known and inherently includes interface cards, dsp units or resources, busses and memory units. However, the Examiner has not shown any reference or any teaching in the art that would provide such components. Further, the Examiner has not shown any art that would teach or suggest a system comprised in the manner as recited in claim 8 and described in the specification. As previously noted, there is no teaching or suggestion in Shaffer et al. or in Wagner et al, alone or in combination, nor is there a teaching or suggestion in the art, for Applicant's audio conferencing system comprising a plurality of network interface cards connected to a host and to a plurality of dsp units, with each dsp unit comprising a plurality of digital signal processing resources configured to manage channels in one or more audio conferences and including a switch for selectively coupling the digital signal processing resources to a bus such that a host can dynamically assign dsp resources to one or more conferences present within the audio conferencing system.

Regarding claims 9 and 18, these claims have been amended to depend from claims 8 and 1, respectively and are considered to be in condition for allowance in the least as being dependent on an allowable base claim for the reasons as provided above.

The claim amendments should in no way be construed to be an acquiescence to any of the rejections. The amendments to the claims are being made solely to expedite the prosecution of the above-identified application. Accordingly, none of the claim amendments are related to patentability, as such amendments are provided to correct claim dependency and correct antecedent basis. Applicant reserves the option to further prosecute the same or similar claims in the instant or subsequent patent applications.

CONCLUSION

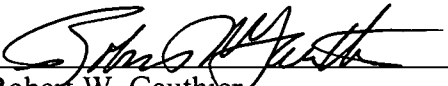
Based on the above Remarks, it is respectfully submitted that this application is in condition for allowance. Accordingly, allowance is requested. If there are any remaining issues or the Examiner believes that a telephone conversation with Applicant's attorney would be helpful in expediting the prosecution of this application, the Examiner is invited to call the undersigned at (617)832-1175.

Respectfully submitted,

FOLEY, HOAG & ELIOT LLP

Date: February 26, 2002

Patent Group
Foley, Hoag & Eliot LLP
One Post Office Square
Boston, MA 02109-2170


Robert W. Gauthier
Reg. No. 35,153

Marked-up version of claims:

8. An audio conferencing system comprising:

a plurality of network interface cards connected by a first bus to a host and connected by a second bus to a plurality of digital signal processing units, and further connected to one or more telecommunications lines, each digital signal processing unit comprising a plurality of digital signal processing [units] resources configured to manage channels in one or more audio conferences associated with one or more of the telecommunications lines, and each digital signal processing unit including a processor connected in a communicating relationship with the host and connected in a communicating relationship with the digital signal processing resources of the digital signal processing unit, each digital signal processing unit further including a memory, the memory storing state information relating to one or more audio conferences and the memory connected in a communicating relationship with the host, and each digital signal processing unit further including a switch for selectively coupling the digital signal processing resources of the digital signal processing unit to the second bus, the host accessing the processor, memory, and switch of one or more of the digital signal processing units to dynamically assign digital signal processing resources to one or more conferences present within the audio conferencing system.

12. [A] The method [for sharing data among a plurality of audio conferencing resources] of claim 10, comprising:

establishing a link line from [a] the first [audio conferencing] resource to [a] the second [audio conferencing] resource; and

transmitting data from the first [audio conferencing] resource to the second [audio conferencing] resource.

15. The method of claim 12 further comprising transmitting data from the second [audio conferencing] resource to the first [audio conferencing] resource.

17. The method of claim 12 wherein the data includes state data for one or more [for] of the one or more lines or conferencing resources.

18. [A] The method of claim 1, [for moving a line within an audio conference] comprising:

determining a switch delay indicative of a delay for switching a line from a source resource to a target resource;

buffering audio data for a line from the source resource at the target resource for an amount of time at least as great as the switch delay, the audio data including talk data for the line;

transferring conference data for the line from the source resource to the target resource, the conference data including state data for the line;

switching the line from the source resource to the target resource; and
using the buffered audio data to maintain audio continuity while switching the line.

19. A method for managing audio conferencing resources comprising:

detecting a loss of a first physical resource, the first physical resource being a resource for conducting at least one [an] audio conference;

identifying one or more audio conferences of the at least one audio conference associated with the first physical resource;

identifying a second physical resource, the second physical resource being a resource for conducting at least one [an] audio conference, and the second physical resource having a capacity for the one or more conferences; and

allocating the one or more conferences to the second physical resource[s].

20. The method of claim 19 wherein the loss [of a first physical resource] is due to at least one of a power failure or a component failure.

21. The method of claim 19 wherein the loss [of a first physical resource] is due to an intentional removal of a resource.

22. The method of claim 19 further comprising repeating the steps of detecting a loss [of a first physical resource], identifying one or more audio conferences associated with

the first physical resource, identifying a second physical resource and allocating the one or more conferences to the second physical resource[s] continuously.

23. [A] The method [for managing audio conferencing resources] of claim 1, comprising:

detecting a loss of [a first physical] another resource[, the first physical resource being a resource for conducting an audio conference];

identifying one or more lines of an audio conference associated with the [physical] other resource[;

identifying a second physical resource, the second physical resource being a resource for conducting an audio conference, and the second physical resource having a capacity for the one or more]; and

allocating the one or more lines to one of the first or second [physical] resources.

24. [A] The audio conferencing system [for allocating resources in an audio conference comprising] of claim 9, wherein:

[a time-slot interchange bus;

a] each of the plurality of network interface cards [connected in a communicating relationship with the bus, each network interface card coupling] couples one or more lines to the time-slot interchange bus using fixed time slots[; and

a plurality of digital signal processing boards, each digital signal processing board including a switch], the switch operable under control of [a] the host to couple with one or more predetermined time slots of the time-slot interchange bus[,] ; and [each digital signal processing board including a plurality of digital signal processing resources connected in a communicating relationship with]

a local time-slot interchange bus, the local bus transmitting data among the digital signal processing resources and the switch[;] ,

whereby any one of the one or more lines can communicate with any one of the digital signal processing resources [without changing] and whereby a time slot associated with the line on the time-slot interchange bus is maintained.